Remarks

The Office Action mailed January 4, 2005, has been carefully reviewed and the following remarks have been made in consequence thereof.

Claims 1, 3-7, and 9-13 are now pending in this application. Claims 1, 3-7, and 9-13 stand rejected. Claims 2 and 8 have been canceled without prejudice, waiver, or disclaimer. Claims 1, 3, 5, 7, and 11 have been amended. No new matter has been added.

The rejection of Claims 1, 3-7 and 9-13 under 35 U.S.C. § 103(a) as being unpatentable over the Applicant's admitted prior art Figure 3, referred to as the prior art Figure 3, in view of Cherry et al. (U.S. Patent 5,119,802), referred to as Cherry, and Michaels (U.S. Patent 3,551,083) is respectfully traversed.

The prior art Figure 3 describes an ignition system (70) that includes a power source (42) feeding a junction box (72). A burner (22) is connected to a ground conductor (78), and the ground conductor is connected to the junction box and tied to a neutral conductor (76) extending from the junction box.

Cherry describes an igniter (48) that includes a wire electrode (50) partially encased in a ceramic insulating jacket (52) with a free end of the electrode projecting radially outwardly from a burner base (44) defining a spark gap (54) between a tip of the electrode and an electrically grounded burner base directly beneath the electrode (column 4, lines 36-42). An ignition circuit (60) is used to generate a spark at the electrode (column 4, lines 49-50). The ignition circuit includes a Harper Wyman spark igniter module (62). Standard 120 volt AC 60 Hz power supply lines L1 and N are coupled to the igniter module via an isolation transformer (64) (column 4, lines 50-53). The isolation transformer and ports 1 and 2 of the ignition module are grounded (Figure 6).

Michaels describes an isolation transformer (72) connected between power supply terminals (66 and 68) and a secondary circuit including a solenoid winding (74) (column 4,

lines 39-42). The primary winding of the transformer has more turns than the secondary winding so that the terminals can be connected directly to an available source of power such as a 120 volt AC supply (column 4, lines 42-46).

Claim 1 recites a method for installing an ignition module for a flame burner to an electrical system, the electrical system including a phase conductor, a neutral conductor, an isolation transformer, and the ignition module, the ignition module including first and second inputs and a single output, the method comprising "coupling the phase conductor and neutral conductor to a primary winding of the isolation transformer; connecting the electrically isolated phase conductor from the isolation transformer to the first input of the ignition module; connecting the electrically isolated neutral conductor from the isolation transformer to the second input of the ignition module; connecting a ground conductor between the electrically isolated neutral conductor and a burner; creating a return path for passing a current via a flame output from the burner and via the ground conductor to the electrically isolated neutral conductor; and connecting the single output to an igniter."

None of the prior art Figure 3, Cherry, or Michaels, considered alone or in combination, describe or suggest a method for installing an ignition module as recited in Claim 1. Specifically, none of the prior art Figure 3, Cherry, or Michaels, alone or in combination, describe or suggest creating a return path for passing a current via a flame output from the burner and via the ground conductor to the electrically isolated neutral conductor. Rather, the prior art Figure 3 describes connecting a burner to a ground conductor, and connecting the ground conductor to the junction box and to a neutral conductor extending from a junction box. Cherry describes providing an electrically grounded burner base directly beneath an electrode, and grounding an isolation transformer and ports 1 and 2 of an ignition module located within an ignition circuit used to spark the electrode. Michaels describes connecting an isolation transformer between power supply terminals and a secondary circuit including a solenoid winding. Accordingly, none of the prior art Figure 3, Cherry, or Michaels, alone or in combination, describe or suggest creating a return path for passing a current via a flame output from the burner and via the ground

conductor to the electrically isolated neutral conductor. For at least the reasons set forth above, Claim 1 is submitted to be patentable over the prior art Figure 3 in view of Cherry and Michaels.

Claims 3-4, and 13 depend from independent Claim 1. When the recitations of Claims 3-4, and 13 are considered in combination with the recitations of Claim 1, Applicant respectfully submits that dependent Claims 3-4, and 13 are also patentable over the prior art Figure 3 in view of Cherry and Michaels.

Claim 5 recites a method for installing an ignition module for a gas-fired burner to an isolation transformer of an electrical system, the isolation transformer including a primary winding and a secondary winding, the secondary winding coupled to an electrically isolated neutral conductor, the electrical system including a phase conductor, a neutral conductor and a ground conductor, the burner connected to the ground conductor, the ignition module including first and second inputs and at least one output, the method comprising "connecting the transformer secondary winding to the first input of the ignition module; connecting the transformer secondary winding to the ground conductor; connecting the second input of the ignition module to the ground conductor; and creating a return path for passing a current via a flame output from the burner and via the ground conductor to the electrically isolated neutral conductor."

None of the prior art Figure 3, Cherry, or Michaels, considered alone or in combination, describe or suggest a method for installing an ignition module as recited in Claim 5. Specifically, none of the prior art Figure 3, Cherry, or Michaels, alone or in combination, describe or suggest creating a return path for passing a current via a flame output from the burner and via the ground conductor to the electrically isolated neutral conductor. Rather, the prior art Figure 3 describes connecting a burner to a ground conductor, and connecting the ground conductor to the junction box and to a neutral conductor extending from a junction box. Cherry describes providing an electrically grounded burner base directly beneath an electrode, and grounding an isolation transformer

and ports 1 and 2 of an ignition module located within an ignition circuit used to spark the electrode. Michaels describes connecting an isolation transformer between power supply terminals and a secondary circuit including a solenoid winding. Accordingly, none of the prior art Figure 3, Cherry, or Michaels, alone or in combination, describe or suggest creating a return path for passing a current via a flame output from the burner and via the ground conductor to the electrically isolated neutral conductor. For at least the reasons set forth above, Claim 5 is submitted to be patentable over the prior art Figure 3 in view of Cherry and Michaels.

Claim 6 depends from independent Claim 5. When the recitations of Claim 6 are considered in combination with the recitations of Claim 5, Applicant respectfully submits that dependent Claim 6 is also patentable over the prior art Figure 3 in view of Cherry and Michaels.

Claim 7 recites an ignition system comprising "a burner for producing a flame; a power supply; an electrical system comprising a ground conductor coupled to said burner; an ignition module comprising a first input, a second input, and a single output, said output operatively coupled to said burner, one of said inputs coupled to said ground conductor, the other of said inputs coupled to said power supply; an isolation transformer connected in series between said power supply and said ignition module; an electrically isolated neutral conductor coupled to said ignition module and said isolation transformer; wherein said ground conductor configured to provide a return path that passes a current from a flame output from said burner to said electrically isolated neutral conductor."

None of the prior art Figure 3, Cherry, or Michaels, considered alone or in combination, describe or suggest an ignition system recited in Claim 7. Moreover, none of the prior art Figure 3, Cherry, or Michaels, considered alone or in combination, describe or suggest the ground conductor configured to provide a return path that passes a current from a flame output from the burner to the electrically isolated neutral conductor. Rather, the prior art Figure 3 describes connecting a burner to a ground conductor, and connecting the ground

conductor to the junction box and to a neutral conductor extending from a junction box. Cherry describes providing an electrically grounded burner base directly beneath an electrode, and grounding an isolation transformer and ports 1 and 2 of an ignition module located within an ignition circuit used to spark the electrode. Michaels describes connecting an isolation transformer between power supply terminals and a secondary circuit including a solenoid winding. Accordingly, none of the prior art Figure 3, Cherry, or Michaels, alone or in combination, describe or suggest the ground conductor configured to provide a return path that passes a current from a flame output from the burner to the electrically isolated neutral conductor. For at least the reasons set forth above, Claim 7 is submitted to be patentable over the prior art Figure 3 in view of Cherry and Michaels.

Claims 9 and 10 depend from independent Claim 7. When the recitations of Claims 9 and 10 are considered in combination with the recitations of Claim 7, Applicant respectfully submits that dependent Claims 9 and 10 are also patentable over the prior art Figure 3 in view of Cherry and Michaels.

Claim 11 recites an ignition system comprising "a gas burner; an AC power supply comprising a phase conductor and neutral conductor; an electrical system comprising a ground conductor coupled to said burner; an isolated neutral conductor; an isolation transformer comprising a primary winding and a secondary winding, said primary winding connected to said phase conductor and to said neutral conductor, said secondary winding coupled to an isolated phase conductor and said isolated neutral conductor; and an ignition module comprising a first input, a second input, and an output, said output electrically connected to an igniter, said ignition module coupled in series with said isolation transformer, wherein one of said inputs coupled to said isolated neutral conductor, the other of said inputs coupled to said isolated phase conductor, said ground conductor coupled to said isolated neutral conductor between said ignition module and said isolation transformer, and said ground conductor configured to provide a return path that passes a current from a flame output from said burner to said isolated neutral conductor."

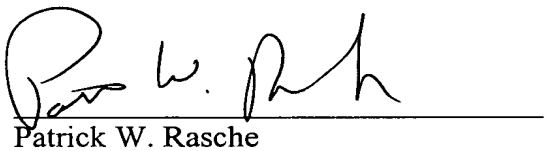
None of the prior art Figure 3, Cherry, or Michaels, considered alone or in combination, describe or suggest an ignition system recited in Claim 11. Moreover, none of the prior art Figure 3, Cherry, or Michaels, considered alone or in combination, describe or suggest the ground conductor configured to provide a return path that passes a current from a flame output from the burner to the isolated neutral conductor. Rather, the prior art Figure 3 describes connecting a burner to a ground conductor, and connecting the ground conductor to the junction box and to a neutral conductor extending from a junction box. Cherry describes providing an electrically grounded burner base directly beneath an electrode, and grounding an isolation transformer and ports 1 and 2 of an ignition module located within an ignition circuit used to spark the electrode. Michaels describes connecting an isolation transformer between power supply terminals and a secondary circuit including a solenoid winding. Accordingly, none of the prior art Figure 3, Cherry, or Michaels, alone or in combination, describe or suggest the ground conductor configured to provide a return path that passes a current from a flame output from the burner to the isolated neutral conductor. For at least the reasons set forth above, Claim 11 is submitted to be patentable over the prior art Figure 3 in view of Cherry and Michaels.

Claim 12 depends from independent Claim 11. When the recitations of Claim 12 are considered in combination with the recitations of Claim 11, Applicant respectfully submits that dependent Claim 12 is also patentable over the prior art Figure 3 in view of Cherry and Michaels.

For the reasons set forth above, Applicant respectfully requests that the Section 103 rejection of Claims 1, 3-7, and 9-12 be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,



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